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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/859,648	05/16/2001	Laurence M. Hubby JR.	10001006-1	3883

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

YENKE, BRIAN P

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/859,648

Applicant(s)

HUBBY, LAURENCE M.

Examiner

BRIAN P. YENKE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment (30 Aug 04).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-17 is/are allowed.
- 6) ☒ Claim(s) 18-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 18-29 have been considered but are moot in view of the new ground(s) of rejection. The examiner disagrees with the applicant's arguments with respect to Ishikawa reflecting light in three directions, the examiner relies on Fig 2-3, there are only two states, on and off, and based upon the state of the pixel determines the direction (only 2 directions possible) of the data.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernstein US 5,903,383 in view of Suzuki et al, US 6,608,620.

In considering claims 18, 22-27 and 33-34

Bernstein discloses a electrostatic memory micromirror display system (Fig 11). Regarding the actuated state and unactuated state in one and another directions, this is inherent in a micromirror device (as also disclosed by applicant's specification), since the mirror either reflects light in only the on state

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or off state. It is also known that a micromirror includes pixels which include 3 subpixels (RGB) this is inherent in a micro-mirror light valve.

Regarding the pixels being formed end to end to form parallel stripes corresponding to the size and configuration of a color stripe illumination pattern, Bernstein does not specifically disclose such limitation. However, the examiner relies on conventional practice as disclosed by Suzuki et al., US 6,608,620 which discloses a matrix type display apparatus which utilizes a parallel stripe pattern which when displayed/reflected corresponds to the size and configuration of a color strip illumination pattern.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Bernstein which discloses a micromirror display system, with Suzuki by allowing the display/system to project the image in a conventional image pattern (i.e. RGB parallel stripes) to allow the user to view the image on a conventional display.

In considering claim 19,

Bernstein discloses column and row drive ASIC control devices 110 and 112 respectively (Fig 11).

In considering claim 20,

Bernstein discloses a video data converter (light valve controller) which received the video data and subsequently feeds the data to row and column driver 112 and 110 respectively.

In considering claims 28-30,

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As discussed with respect to claim 18, and in addition the parallel stripes would collectively have a size substantially equal to the size of the illumination pattern upstream/downstream based upon the orientation of the micromirrors and the screen/display.

In considering claims 32 and 35-36,

The combination of Bernstein and Suzuki does not specifically disclose the color strip illumination pattern being generated prior to being reflected by the sub-pixels.

Although, the use of an lenticular array (which produces the color strip illumination pattern) is notoriously well known component in projection systems to adequately reflect/deflect beams in a predetermined direction. Thus the examiner takes "OFFICIAL NOTICE" regarding such a device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Bernstein and Suzuki which discloses a micromirror display which allows the display/system to project the image in a conventional image pattern (i.e. RGB parallel stripes) by also allowing the designer of the system to incorporate lenticular arrays within the projection system which would afford the designer the ability to accurately reflect/deflect light from the light source, which would then be generated prior to be reflected by the light valve.

Conclusion

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3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure—please refer to newly cited references on attached form PTO-892.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Yenke whose telephone number is (703) 305-9871. The examiner work schedule is Monday-Thursday, 0730-1830 hrs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, John W. Miller, can be reached at (703)305-4795.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-HELP.

General information about patents, trademarks, products and services offered by the United States Patent and Trademark Office

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(USPTO), and other related information is available by contacting the

USPTO's General Information Services Division at:

800-PTO-9199 or 703-308-HELP

(FAX) 703-305-7786

(TDD) 703-305-7785

An automated message system is available 7 days a week, 24 hours a day providing informational responses to frequently asked questions and the ability to order certain documents. Customer service representatives are available to answer questions, send materials or connect customers with other offices of the USPTO from 8:30 a.m. - 8:00p.m. EST/EDT, Monday-Friday excluding federal holidays.

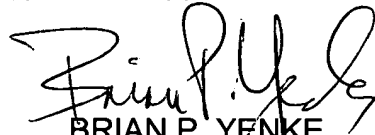
For other technical patent information needs, the Patent Assistance Center can be reached through customer service representatives at the above numbers, Monday through Friday (except federal holidays) from 8:30 a.m. to 5:00 p.m. EST/EDT.

General information brochures can also be obtained in person from the Patent Search Room located in Crystal Plaza 3, Room 1A03, 2021 South Clark Place, Arlington, VA 22202.

The Patent Electronic Business Center (EBC) allows USPTO customers to retrieve data, check the status of pending actions, and submit information and applications. The tools currently available in the Patent EBC are Patent Application Information Retrieval (PAIR) and the Electronic Filing System (EFS).

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PAIR (<http://pair.uspto.gov>) provides customers direct secure access to their own patent application status information, as well as to general patent information publicly available. EFS allows customers to electronically file patent application documents securely via the Internet. EFS is a system for submitting new utility patent applications and pre-grant publication submissions in electronic publication-ready form. EFS includes software to help customers prepare submissions in extensible Markup Language (XML) format and to assemble the various parts of the application as an electronic submission package. EFS also allows the submission of Computer Readable Format (CRF) sequence listings for pending biotechnology patent applications, which were filed in paper form.



BRIAN P. YENKE
Primary Examiner
Art Unit 2614



B.P.Y.

08 January 2005